

ABSTRACT OF THE DISCLOSURE

5 An improved apparatus for generating a high-pressure fluid jet includes an
orifice mount having a frusto-conical surface that engages a frusto-conical wall in a cutting
head, the geometry of the orifice mount and cutting head being selected to increase the
stability of the mount and reduce deflection of the mount adjacent a jewel orifice, when
subjected to pressure. Alignment of a nozzle body and the cutting head is improved by
10 providing pilot diameters both upstream and downstream of threads on the nozzle body and
bore of the cutting head, respectively. Accurate placement of a mixing tube in a cutting
head is achieved by rigidly fixing a collar to an outer surface of the mixing tube, the collar
engaging a shoulder and bore of the cutting head downstream of a mixing chamber, to
precisely locate the mixing chamber axially and radially.

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